

**IN THE CLAIMS:**

Please preliminarily amend the claims to read as follows:

Claim 1. (cancelled) A method for transmitting data comprising:

a first frequency channel transmitting a first pulse position modulation signal;

a second channel transmitting a second pulse position modulation signal, wherein said data is alternatively encoded with the first pulse position modulation signal and the second pulse position modulation signal.

Claim 2. (new) An apparatus comprising:

a first transmitter operable to transmit a first pulse position modulation signal in a first frequency channel;

a second transmitter operable to transmit a second pulse position modulation signal in a second frequency channel; and

an encoder operable to at least in part encode data in the first pulse position modulation signal and/or the second pulse position modulation signal.

Claim 3. (new) The apparatus of claim 2, wherein the encoder is further operable to at least in part encode the data by alternating between the first pulse position modulation signal and/or the second pulse position modulation signal.

Claim 4. (new) The apparatus of claim 2, wherein the encoder is further operable to at least in part encode the data in a respective amplitude component of the first pulse position modulation signal and/or the second pulse position modulation signal.

Claim 5. (new) The apparatus of claim 2, wherein the data comprises a packet.

Claim 6. (new) The apparatus of claim 5, wherein the packet comprises a header.

Claim 7. (new) The apparatus of claim 2, wherein the encoder is further operable to at least in part encode the data in a time difference between the first pulse position modulation signal and/or the second pulse position modulation signal.

Claim 8. (new) The apparatus of claim 2, and further comprising:

a third transmitter operable to transmit a third pulse position modulation signal in a third frequency channel;

a fourth transmitter operable to transmit a fourth pulse position modulation signal in a fourth frequency channel; and

wherein the encoder is further operable to encode data at least in part in the third pulse position modulation signal and/or the fourth pulse position modulation signal.

Claim 9. (new) The apparatus of claim 8, wherein the encoder is further operable to at least in part encode the data by alternating between the third pulse position modulation signal and/or the fourth pulse position modulation signal.

Claim 10. (new) The apparatus of claim 8, wherein the encoder is operable to at least in part encode the data in a respective amplitude component of the third pulse position modulation signal and/or the fourth pulse position modulation signal.

Claim 11. (new) The apparatus of claim, 8 wherein the data comprises a packet.

Claim 12. (new) The apparatus of claim 11, wherein the packet comprises a header.

Claim 13. (new) The apparatus of claim 8, wherein the encoder is further operable to at least in part encode the data in a time difference between the third pulse position modulation signal and the fourth pulse position modulation signal.

Claim 14. (new) The apparatus of claim 8, wherein the encoder is operable to at least in part encode the data by alternating between the first pulse position modulation signal, the second pulse position modulation signal, the third pulse position modulation signal, and/or the fourth pulse position modulation signal.

Claim 15. (new) A system comprising:

- a computing device;

- a first transmitter operable to transmit a first pulse position modulation signal in a first frequency channel;

- a second transmitter operable to transmit a second pulse position modulation signal in a second frequency channel; and

- an encoder operable to communicate with the computing device and operable to at least in part encode data in the first pulse position modulation signal and/or the second pulse position modulation signal.

Claim 16. (new) The system of claim 15, wherein the encoder is operable to at least in part encode the data by alternating between the third pulse position modulation signal and the fourth pulse position modulation signal.

Claim 17. (new) The system of claim 15, wherein the encoder is operable to at least in part encode the data in a respective amplitude component of the first pulse position modulation signal and/or the third pulse position modulation signal.

**Claim 18. (new) The system of claim 15, wherein the data comprises a packet.**

**Claim 19. (new) The system of claim 18, wherein the packet comprises a header.**

**Claim 20. (new) The apparatus of claim 15, wherein the encoder is further operable to at least in part encode the data in a time difference between the first pulse position modulation signal and the second pulse position modulation signal.**

**Claim 21. (new) The system of claim 15 further comprising:**

**a first receiver operable to receive a third pulse position modulation signal in a first frequency channel;**

**a second receiver operable to receive a fourth pulse position modulation signal in a second frequency channel; and**

**a decoder operable to decode the third pulse position modulation signal and/or the fourth pulse position modulation signal into data.**

**Claim 22. (new) The system of claim 21, and further comprising:**

**a second computing device;**

**a third transmitter operable to transmit a fifth pulse position modulation signal in a first frequency channel;**

**a fourth transmitter operable to transmit a sixth pulse position modulation signal in a second frequency band; and**

**a second encoder operable to communicate with the second computing device and operable to at least in part encode data in the fifth pulse position modulation signal and/or the sixth pulse position modulation signal.**

**Claim 23. (new) The system of claim 22, wherein the second encoder is further operable to at least in**

part encode the data in a time difference between the fifth pulse position modulation signal and the sixth pulse position modulation signal.

**Claim 24. (new) A method comprising:**

transmitting a first pulse position modulation signal in a first frequency channel;

transmitting a second pulse position modulation signal in a second frequency channel;

encoding data at least in part into the first pulse position modulation signal and/or the second pulse position modulation signal.

**Claim 25. (new) The method of claim 24, wherein said encoding data comprises encoding the data at least in part into an amplitude component of the first pulse position modulation signal.**

**Claim 26. (new) The method of claim 24, wherein said encoding data comprises at least in part encoding the data by alternating between encoding the data into the first pulse position modulation signal and the second pulse position modulation signal.**

**Claim 27. (new) The method of claim 24, and further comprising encoding at least a portion of the data at least in part into a time difference between the first pulse position modulation signal and the second pulse position modulation signal.**

**Claim 28. (new) An apparatus comprising:**

a first transmitting means for transmitting a first signal;

a second transmitting means for transmitting a second signal; and

an encoding means for encoding data at least in part into the first and/or second signals.

**Claim 29. (new) The apparatus of claim 28 further comprising:**

a first receiving means for receiving a third signal;

a second receiving means for receiving a fourth signal; and

a decoding means for decoding data at least in part from the third and/or fourth signals.

Claim 30. (new) A method comprising:

encoding a first portion of data;

transmitting the encoded first portion of data at least in part in a first pulse position modulation signal in a first frequency channel;

encoding a second portion of data at least in part while transmitting the first portion of data; and

transmitting the encoded second portion of data at least in part in a second pulse position modulation signal in a second frequency channel.

Claim 31. (new) The method of claim 30, wherein encoding the first portion of data comprises encoding the first portion of data at least in part into an amplitude component of the first pulse position modulation signal.

Claim 32. (new) The method of claim 31, wherein encoding the second portion of data further comprises encoding the second portion of data at least in part into an amplitude component of the second pulse position modulation signal.

Claim 33. (new) The method of claim 30, further comprising encoding a third portion of data at least in part into a time difference between the first pulse position modulation signal and the second pulse position modulation signal.

Claim 34. (new): A system comprising:

a first transmitter for transmitting data in a first pulse position modulation signal in a first frequency channel;

a second transmitter for transmitting data in a second pulse position modulation signal in a second frequency channel; and

an encoder for converting data at least in part into an electromagnetic form for transmission by the first and/or second transmitter.

Claim 35. (new) The system of claim 34, and further comprising:

a first receiver for receiving a third portion of data in a third pulse position modulation signal in the first frequency channel;

a second receiver for receiving a fourth portion of data in a fourth pulse position modulation signal in the second frequency channel; and

a decoder for converting the third pulse position modulation signal and/or the fourth pulse position modulation signal into the third portion of data and/or the fourth portion of data, respectively.

Claim 36. (new): A system comprising:

a first computing device;

a first transceiver capable of being in communication with said first computing device and capable of transmitting and/or receiving a first portion of data at least in part in a first pulse position modulation signal in a first frequency channel and/or a second portion of data at least in part in a second pulse position modulation signal in a second frequency channel.

Claim 37. (new) The system of claim 36, and further comprising:

a second computing device; and

a second transceiver capable of being in communication with said second computing device and capable of transmitting and/or receiving a third portion of data at least in part in a third pulse position modulation signal in the first frequency channel and/or a fourth portion of data at least in part in a fourth pulse position modulation signal in the second frequency channel.

**Claim 38. (new) An apparatus comprising:**

**a transmitter operable to transmit data at least in part in a plurality of non-simultaneous pulses, the plurality of pulses comprising a plurality of frequency hopped pulses.**

**Claim 39. (new) The apparatus of claim 38, wherein the plurality of frequency hopped pulses comprise a set of pulse position modulated signals.**

**Claim 40. (new) The apparatus of claim 38, and further comprising:**

**an antenna operable to transmit the plurality of non-simultaneous pulses.**

**Claim 41. (new) The apparatus of claim 38, and further comprising:**

**a plurality of antennas operable to transmit the plurality of non-simultaneous pulses.**

**Claim 42. (new) The apparatus of claim 41, wherein an antenna of the plurality of antennas is operable to be selected to transmit the plurality of non-simultaneous pulses**

**Claim 43. (new) The apparatus of claim 41, wherein a set of the plurality of antennas are operable to be selected to transmit a selected set of the plurality of non-simultaneous pulses.**

**Claim 44. (new) The apparatus of claim 38, and further comprising:**

**a receiver operable to receive a second plurality of non-simultaneous pulses, the second plurality of non-simultaneous pulses comprising a plurality of frequency hopped pulses.**

**Claim 45. (new) The apparatus of claim 44, wherein the plurality of frequency hopped pulses comprise a set of pulse position modulated signals.**

**Claim 46. (new) The apparatus of claim 44, and further comprising:**



an antenna operable to receive the second plurality of non-simultaneous pulses.

Claim 47. (new) The apparatus of claim 44, and further comprising:

a plurality of antennas operable to receive the second plurality of non-simultaneous pulses.

Claim 48. (new) The apparatus of claim 47, wherein an antenna of the plurality of antennas is operable to be selected to receive the second plurality of non-simultaneous pulses.

Claim 49. (new) The apparatus of claim 48, wherein the antenna of the plurality of antennas is operable to be selected based at least in part on a signal strength of the second plurality of non-simultaneous pulses.

Claim 50. (new) The apparatus of claim 48, wherein the antenna of the plurality of antennas is operable to be selected based at least in part on a pulse presence.

Claim 51. (new) The apparatus of claim 47, wherein a set of antennas of the plurality of antennas is operable to be selected to receive the second plurality of non-simultaneous pulses.

Claim 52. (new) The apparatus of claim 51, wherein the set of antennas of the plurality of antennas are operable to be selected based at least in part on a signal strength of the second plurality of non-simultaneous pulses.

Claim 53. (new) The apparatus of claim 52, wherein the set of antennas of the plurality of antennas are selected based at least in part on a pulse presence.

Claim 54. (new) An apparatus comprising:

a plurality of transmitters operable to transmit a plurality of pulse position modulation signals, the plurality of pulse position modulation signals having respective frequency channels; and  
an encoder operable to encode data at least in part into the plurality of pulse position modulation signals.

Claim 55. (new) A method comprising:

transmitting data at least in part in a plurality of non-simultaneous pulses; and  
frequency hopping at least a portion of the plurality of non-simultaneous pulses.

Claim 56. (new) The method of claim 55, wherein the plurality of non-simultaneous pulses comprise a set of pulse position modulated signals.

Claim 57. (new) The method of claim 55, and further comprising selecting an antenna from a plurality of antennas to transmit the plurality of non-simultaneous pulses.

Claim 58. (new) The method of claim 55, and further comprising selecting a set of antennas from a plurality of antennas to transmit the plurality of non-simultaneous pulses.

Claim 59. (new) The method of claim 55, and further comprising receiving the plurality of non-simultaneous pulses.

Claim 60. (new) The method of claim 59, and further comprising selecting an antenna from a second plurality of antennas to receive the plurality of non-simultaneous pulses.

Claim 61. (new) The method of claim 60, wherein selecting an antenna from a second plurality of antennas is based at least in part on a signal strength of the plurality of non-simultaneous pulses at said antenna.

**Claim 62. (new)** The method of claim 59, and further comprising selecting a set of antennas from a second plurality of antennas to receive the plurality of non-simultaneous pulses.

**Claim 63. (new)** The method of claim 62, wherein selecting the set of antennas from the second plurality of antennas is based at least in part on a signal strength of the plurality of non-simultaneous pulses at said set of antennas.